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Nutrition as an entry point for health-promoting schools: lessons from China

Health, education and nutrition support enhance each other. For instance, healthy nutritional status improves educational potential by positively affecting attention span, learning capacity and ability to engage fully in educational experiences (Del Rosso and Marek, 1996; Levinger, 1996; Pollitt, 1990). Undernourishment in early childhood can negatively influence school aptitudes, time of school enrolment, school attendance and concentration (WHO, 1996; Levinger, 1996; Pollitt, 1990). Schools are ideal settings for nutrition programmes and services, because nutrition and education are closely linked, and because dietary, hygienic and exercise habits that affect nutritional status are formed during the school-age years (WHO/FAO, 1998). The World

Health Organization (WHO) and FAO are collaborating in promoting and strengthening school-based nutrition interventions in developing countries. A project in China illustrates the approach the two organizations are advocating.

The project

Since 1995, the Government of China and WHO have collaborated to establish health-promoting schools (HPS). This calls for collaboration among health and education officials, teachers, students, parents and community leaders to foster health and learning through improvements in school environments, policies and practices (WHO/FAO, 1998).

In 1999, the Chinese Ministries of Health and Education requested assistance in the development of HPS with a focus on nutrition. WHO entrusted the Education Development

Nutritional status of Chinese children and youth

Nutrition is a viable point of entry for creating health-promoting schools (HPS) in China. Nutritional deficiencies and overnutrition are significant and growing problems in many parts of China. A national survey on diet and nutrition in 1992 revealed that the energy intake of young people between the ages of two and 18 years reached 97 percent of the requirements, but nutrient intake was unbalanced. While protein intake was 88 percent of the recommended dietary allowance (RDA), calcium intake reached only 38 percent. This study further revealed high rates of iron-deficiency anaemia (13–26 percent), as well as high rates of vitamin A deficiency (59–76 percent) and zinc deficiency among Chinese youth (Chen, 1999).

Another survey conducted in eight Chinese cities revealed an increase in obesity from 3.4 percent in 1985 to 7.2 percent in 1996 among 7–18-year-old students (*ibid.*). An investigation in the project area by the medical school of Zhejiang University revealed that the rates of nutritional deficiencies and overweight or obesity in 1 230 primary and secondary school students in Hangzhou City were 22.5 percent and 24.6 percent respectively (Yang, Fan and Wang, 2000). The 1999 medical examinations of Wenzhou City's students revealed that 17.1 percent of the primary school population and 32.6 percent of the middle school population are malnourished (Wenzhou City Center for Disease Control and Prevention – unpublished data).

Lack of knowledge regarding proper diet and healthy nutrition represents a major cause of both undernutrition and obesity among school-age children in China. It has been recommended that high-quality nutrition education be provided to students, parents and teachers throughout the country (Zhang and Cai, 2002; Sun, 2001; Lu *et al.*, 2001).

Three primary and three secondary schools from Zhejiang Province, located in the southeastern part of China, participated in this project. Four schools were located in the Jianggan District of Hangzhou City – one primary and one secondary school in the town and one of each in the rural part of the district. The remaining two schools (one primary and one secondary) were located in urban Wenzhou City. Another set of six schools, three primary and three secondary, were selected from Hangzhou City and Wenzhou City as a control group.

Training and mobilization

To prepare participating schools and communities for the project, the Provincial Working Group arranged a number of activities. In April 2000, a training workshop with experts from WHO, FAO, EDC and Chinese universities was held for school health officials from provincial and county Departments of Health and Education, and head teachers, teachers and food and health service representatives from the pilot schools. The goals of the workshop

Center (EDC)¹ with the task of providing technical assistance in the field of health promotion in schools. FAO joined the initiative, providing technical expertise in the field of school-based nutrition

1. to contribute to the improvement of the nutrition and health status of students in the project schools through health and nutrition interventions;

Dietary, hygienic and exercise habits that affect nutritional status are formed during the school-age years

education and, alongside EDC, advice on project planning, implementation and evaluation.

A Provincial Working Group, based at the Health Education Institute of the Zhejiang Provincial Center for Disease Control and Prevention, selected six pilot schools and developed a work plan using the joint WHO/FAO publication (1998) *Healthy nutrition: an essential element of a health-promoting school* as a guide. The project had the following overall goals:

2. to develop a model project for nutrition interventions as an entry point for the development of health-promoting schools, which can be replicated by other schools in China.

The specific project objectives were:

1. improvement of the food intake and dietary behaviours of the target groups through improved nutrition education and improved school-meal services;
2. to introduce changes in the project schools in order to meet the (bronze medal) standards of the WHO health-promoting schools.

were to (a) introduce the WHO/FAO publication mentioned above and review its relevance to the development of the pilot project; (b) review the methodologies and findings of a national survey of the nutritional status of China's school-age population; and (c) review and improve the project work plan developed by the Provincial Working Group. Site visits were made to all four pilot schools in Hangzhou City.

In October 2000, working groups from each pilot school visited existing HPS in Jiaying City. These schools described their experiences and lessons

¹ EDC is an international non-profit organization headquartered in Newton, MA, United States, and is a WHO Collaborating Centre for health promotion through schools and communities.

learned from using tobacco prevention as an entry point for creating an HPS. In early December 2000, members of the Provincial Working Group visited a high-performing HPS in Wuhan to obtain additional information about how to create a successful HPS.

Each pilot school held a mobilization meeting following a baseline investigation. The meetings aimed to inform the school community about the key findings of the baseline survey, discuss plans for the specific nutrition promotion activities to be conducted, and encourage teachers, students, parents and community leaders to participate.

Intervention

SCHOOL ACTIVITIES

Each pilot school established a working group comprising the head teacher, teachers, students, parents and community leaders. The groups planned, initiated and coordinated project activities and consulted with experts from the local health and education bureaus. Experts from the Provincial Working Group and the Nutrition Department at Zhejiang University's Medical College provided nutrition training to teachers, health-care providers and cafeteria staff. School staff learned about such topics as healthy nutrition and the importance of a balanced diet, nutritional deficiencies and their effects, and good hygienic practices.

WHO, FAO, EDC and the Provincial Working Group provided educational materials such as *Get the best from your food*,² *Nutrition guide for China's students*, the weekly newspaper *China Student Nutrition*, and a student nutrition wall map. Each pilot school also developed its own nutrition materials and resources for students, staff and parents.

Students attended a health education class once every two weeks. Diverse instructional techniques were employed within these classes. If there was no provision for a health class in a school's

curriculum, nutrition-focused morning or afternoon talks and/or other extracurricular activities were added to the school day. In addition, pilot schools often integrated instruction concerning nutrition-related topics into more traditional academic subjects such as arts and language composition. Other creative instructional methods included the following:

- training students to prepare nutritious food;
- the involvement of students in planning the school lunch menu;
- the organization of school television teams to conduct broadcasts on nutrition- and health-related topics;
- the creation by students of Web sites on nutrition-related topics.

The Provincial Working Group organized composition and drawing competitions on the theme "Nutrition, health and me", and a nutrition and health knowledge contest for students in the pilot schools. First- and second-grade students participated in the drawing competition and third-grade students participated in both the drawing and composition competitions. A team from each pilot school was selected to take part in an interschool nutrition and health knowledge contest, held at a participating secondary school in Hangzhou City.

SCHOOL ENVIRONMENT

All of the pilot schools supplemented their nutrition education activities with improvements in health-related school policies and the overall environment, including renovations to school facilities and grounds. Physical and operational improvements were made to many of the schools' kitchens and dining areas. Changes in cafeteria practices included the increased use of uniforms (e.g. hats and gloves), greater enforcement of hygienic practices and regular medical examinations for all cafeteria staff. School restrooms, gardens and sports fields were cleaned or renovated as needed. Some schools upgraded their medical equipment and tested and cleaned their

water supplies. The participating schools initiated regular health examinations for students and teachers and began to keep files with students' health records. When an examination revealed a health problem or students became ill, school personnel communicated with parents; they also began to make more referrals to appropriate health-care institutions in the community. Most or all of the schools established policies that place a high priority on health and nutrition promotion. They further developed policies against insults and physical punishments, posted "No smoking" signs, and increased their emphasis on collaboration among students, teachers and other school staff. One school even delayed the start of the school day in order to allow students sufficient time to rest and eat a healthy breakfast.

FAMILIES AND COMMUNITIES

Students passed on the information that they received at school about good nutrition to their families and to the wider community. Parents were given leaflets about healthy nutrition and school lunch menus showing a variety of balanced meals that they could prepare at home. Parents and community members were also invited to the schools for lectures and workshops on health and nutrition. In addition, students distributed or read out health and nutrition information to passers-by on the streets.

CONTROL SCHOOLS

Routine health education activities continued in the control schools. According to the national teaching programme, most schools in the country carry out health education activities in combination with physical education or science classes. These activities provide knowledge on topics such as hygiene, nutrition and physical development.

Evaluating project effects

Project achievements (with regard to knowledge of, and attitudes towards, nutrition and other health issues as well

² See *Food, Nutrition and Agriculture* 24, 1999, for further information about "Get the best from your food".

as students' dietary and hygienic habits) were assessed using a 44-item questionnaire before and after the intervention, at both pilot and control schools. Students in grades 3, 4 and 5 of the primary schools (2 575 students) and grades 1 and 2 of the secondary schools (4 277 students) were followed. School personnel (661) and

schools. Two facts could be responsible for this observation. First, routine health education activities (in physical education or science classes) that included hygiene and nutrition continued in the control schools. In addition, targeted interventions such as this project are usually not the only source of change in a

all members of the school community, and teachers and parents or guardians represent key influences on the development of young people with regard to health behaviour.

The inconsistency of survey findings related to the students' breakfast habits again emphasizes the need to ensure that

Even schools in resource-poor countries can implement a range of activities that are feasible with their available resources to establish HPS and to achieve significant positive change

students' parents and guardians (998) were also interviewed.

The results achieved by the project were quite impressive. The data analysis showed statistically significant effects of the interventions among all participating groups and with regard to all parameters addressed: knowledge, attitudes and practice. Moderate improvements in some variables also occurred at the control schools, however. Details of the data analysis are reported elsewhere.

Project achievements

Changes in nutrition knowledge, attitudes and practices

The schools had implemented a wide range of nutrition-education and other health-promotion activities, and the final evaluation indeed revealed significant improvements in a number of the studied variables. Given the fairly short intervention period (a maximum of 18 months), it is not surprising that some of these changes in knowledge, attitude and behaviour were of moderate magnitude. If the interventions are continued, even stronger and sustained effects are likely.

Overall, greater gains in nutrition-related knowledge, attitudes and practices took place at the pilot schools, but improvements in some variables (though not all) also occurred at the control

population; this factor is particularly relevant in a society that is in the process of rapid and substantial changes – as is the case in the project region.

The finding that primary school students at both pilot and control schools demonstrated significant improvements in nutrition-related knowledge, attitudes and behaviour, whereas secondary school students at the pilot schools alone demonstrated such improvements, suggests that the intervention was particularly effective for the latter group. One explanation for this could be that content and format of the nutrition interventions (in particular, nutrition education) were more appropriate for older students. If so, enhanced efforts should be made to develop educational materials and approaches that are adapted to the needs of young students. It may also have been the case that the survey questionnaire was more adapted to the intellectual level of older students, resulting in more valid answers among this age group.

In this project, the examination of nutrition-related *attitudes* was limited to those of the students. In the future, however, research should also be carried out on the nutrition-related attitudes of school staff and parents or guardians. This is important for two reasons: HPS are designed to promote the well-being of

survey questions are formulated clearly and field-tested prior to survey administration.

The role of extra funds for changes in the school environment

This intervention stimulated the pilot schools to make significant improvements to the actual school settings. School facilities – including cafeterias, rest rooms and grounds – were cleaned and renovated; health services for students and teachers were either initiated or enhanced; and a variety of policies were established to make the schools safer and healthier places to learn and work. These achievements on the part of the pilot schools were consistent with the project's intent to strengthen each school's capacity to address wider health issues, as well as nutrition, and encourage schools to become HPS. These achievements were facilitated by the content of the WHO/FAO (1998) publication on healthy nutrition, which is designed to lead and assist health and education workers in using nutrition issues in developing the components of an HPS, and to mobilize school and community resources to support them. While resources may already have existed in the communities, it is important to

recognize that a significant amount of those resources were mobilized for nutrition and school health during the implementation of the pilot projects. The HPS model calls for the implementation of health policies, environmental improvements and health and nutrition services in addition to health education activities, to help schools improve nutrition and health. The pilot schools clearly mobilized interest and resources that allowed them to implement each of these components. Further pilot studies will be needed to determine the extent to which schools in communities with fewer existing resources will be able to do so. However, even schools in resource-poor countries can implement a range of activities that are feasible with their available resources to establish HPS and to achieve significant positive change.

School and community support

Another factor that contributed to the project's success was the enthusiasm with which the participants approached the concept of using nutrition as a point of entry to establish HPS. Nutrition is an issue that affects everyone. Discussions with students, school staff and parents revealed that there was a clear need for nutrition information and education and that they were highly appreciated. The pilot schools were excited at the opportunity to address this interest, given the rapid economic and social changes that this society had been experiencing and the fact that improving the education and health of the population had become a high governmental and public priority. This level of enthusiasm was maintained throughout the project and, the final evaluation clearly indicated that the six pilot schools were firmly committed to nutrition education and the overall HPS model.

Lessons learned

Apart from the immediate effects on nutrition (and health) knowledge, attitudes and practices among all groups addressed by this project, a number of

Lessons learned from the China HPS project

SUCCESS FACTORS/STRENGTHS

Support

- Good and supportive school management (leadership)
- Government support and adequate funding
- Collaboration of schools with the municipality and with health-care institutions (e.g. nutritionists, hospital dieticians for menu preparation)

Processes

- Giving students a role in communicating with parents and the wider community
- Using interactive approaches and encouraging active roles for students and teachers
- Involving students in all phases of menu preparation (enhances acceptance of the meals and provides excellent opportunities for nutrition education)
- Applying creativity and imagination in recipe selection, meal presentation and accompanying information campaigns
- Making use of positive peer influence (establishing a system through which students can acquire publicly acknowledged "nutrition credits"; providing the opportunity for some students to become "nutrition guides")
- Integrating nutrition education into other school subjects (e.g. in "moral education")

Participation

- Full involvement and maintenance of close ties with parents and the community
- Regular meetings with students and parents

Plans and standards

- Good standard (if necessary, improvement) of school facilities, equipment, etc.
- Clear and detailed programme and work plan set by the school management; helps to overcome initial scepticism on the part of other school staff and teachers

Materials and activities

- Producing a variety of own materials on food, nutrition and health
- A wide spectrum of activities, involving many different communication channels for teaching and outreach to families and the community
- Site visits with students (e.g. to "City Lunch Kitchen")
- Development and preparation of nutritious meals; school Web pages
- Surveys in the community; "open school days"; "parents' school"

Communication channels

- Conveying nutrition messages through a wide range of different communication channels at school and in community outreach: classroom lectures; student newspapers and health broadcasts with student, and in some cases, parent participation; posters carrying health and nutrition information (sometimes as part of a drawing competition); traditional Chinese news boards; student performances (prepared by teachers in collaboration with students) on topics related to healthy nutrition and physical activity
- Regional school contests on health and nutrition topics

CHALLENGES

Resources (including time and materials)

- Burden on individual teachers can be considerable
- Lack of written teaching/learning materials
- Insufficient integration of nutrition education into the regular curriculum (greater integration was mentioned as an important condition for the continuation and/or improvement of the project, because of nutrition education being in conflict with the timetabling requirements of other subjects)

Training and outreach

- Teachers need to receive nutrition training prior to their project involvement in order to prevent them conveying nutrition messages that are technically incorrect
- Training of students *and* teachers needs to be simultaneous and ongoing
- Poor nutrition knowledge and attitudes among the general population (can diminish the positive effect of nutrition education among students)
- Overwhelming need for health and nutrition information in families and communities, which schools alone are not able to satisfy
- Need for outreach to families and communities

lessons were learned that could benefit schools interested in embarking on a similar project. Discussions were held with the many professionals who participated in the project (head teachers, teachers, nurses, food service managers, etc.) and, on the basis of their experiences, a comprehensive list of “success factors” and “challenging factors” was drawn up for this kind of intervention (see Box 2).

attitudes related to health and nutrition can largely determine the effectiveness of nutrition education for students.

During this project, parents were highly interested in receiving information on food, diet and health and were eager to attend training sessions. Yet schools did not have the capacity to meet this demand for increased nutrition information and education. It became apparent that school projects should seek close collaboration

support of nutrition and school health may have been a decisive factor in achieving the remarkably vivid project implementation and the good results. Ensuring governmental support will certainly help individual schools to take on similarly comprehensive health-promotion initiatives.

In addition, it is necessary to ensure that the teachers involved are well prepared in terms of both content and

Establishing nutrition and health education as a regular element of the school curriculum remains an important objective

A “health promotion” approach enhances the effectiveness of nutrition education

The HPS approach in general recommends a comprehensive approach that includes the whole school, the parents and the community. The experiences of this project fully confirm the importance of this concept. Although the project did not specifically set out to make a comparison between a narrow (education only) and a comprehensive (promotion) approach, the boosting effect of an integrated approach (covering not only nutrition education in the classroom, but also involving changes to the school policy and environment, to school-based health and nutrition services, and active outreach to family and community members) became very evident.

Parents are a key group in nutrition education for students

Given their role as food providers and care givers at home, parents are a particularly important group to address, in addition to the students themselves, when aiming to change the students’ eating habits. Parallel efforts to upgrade the parents’ knowledge, skills and

with health sector institutions from the outset and that such collaboration could be of mutual benefit. Schools can benefit from such collaboration, for instance through the provision of materials and expertise. For the public health institutions, HPS activities in schools provide an ideal opportunity for delivering health and nutrition education services to an interested and motivated audience. Thus the project underlined the importance of complementary action targeted at the whole community.

“Local action” is possible; backing it up at national level is better

The large number and wide scope of activities, and the enthusiasm with which they were undertaken by the pilot schools, clearly demonstrated that “local action” is possible. Schools, with fairly limited external guidance and technical assistance, were able to plan and implement an impressive array of activities at different levels, involving students, teachers, the entire school, families and the communities.

However, the exceptional efforts of provincial and local education and health officials to mobilize governmental, parental and community resources in

instructional methods. Quality teacher training to upgrade their knowledge of nutrition and pedagogical approaches was mentioned by many of the professional project participants as a crucial precondition for effective nutrition education. Governmental provision could also help alleviate the additional time burden that this type of project represents for teachers who already feel overwhelmed by their traditional academic responsibilities.

Making nutrition education an element of the regular classroom curriculum

Nutrition and health training for both students and school staff has to compete for time with many other important academic and professional development topics. In fact, the vast majority of the activities undertaken by the pilot schools during the project were extracurricular. Although they were valuable and effective in promoting positive change among the target groups, establishing nutrition and health education as a regular element of the school curriculum remains an important objective. Until this happens, health-related topics can be sidelined too easily where conflicts emerge with traditional academic subjects or other

appealing extracurricular activities. Furthermore, high-quality support materials may not be made available to schools unless nutrition and health education is integrated into the regular curriculum.

Disseminating the project's experiences and lessons learned

Although much work remains to be done to prepare schools adequately for comprehensive health-promotion initiatives and to embed health as a priority topic in the regular school curriculum, the positive changes that were evident across all six pilot schools indicate that this intervention was effective. The project clearly demonstrated that nutrition can serve as an effective point of entry for developing HPS in China. The Provincial Working Group and the six pilot schools are determined to share the experiences of these successful interventions with other schools and to scale up this project. There are also further plans to address other health topics through HPS.

references

- Chen, X.C.** 1999. Research progress of children's nutrition in China. *Chinese Journal of Preventive Medicine*, 33: 134–136.
- Del Rosso, J.M. & Marek, T.** 1996. *Class action: improving school performance in the developing world through better health and nutrition*. Washington, DC, The World Bank.
- Levinger, B.** 1996. *Nutrition, health and education for all*. Newton, Massachusetts, USA, Education Development Center, Inc. and New York, United Nations Development Programme.
- Lu, J.P., Dai, X.L., Yu, L.L. & Zhang, Y.A.** 2001. Impact of health education on the improvement on anaemia in students. *Chinese Journal of School Health*, 22: 315–316.
- Pollitt, E.** 1990. *Malnutrition and infection in the classroom*. Paris, UNESCO.
- Sun, S.C.** 2001. Students' nutrition in 1991-2000 in Tianjin. *Chinese Journal of School Health*, 22: 521–522.
- WHO.** 1996. *The status of school health*. Geneva.
- WHO/FAO.** 1998. *Healthy nutrition: an essential element of a health-promoting school*. Geneva.
- Yang, Q, Fan, X.Q. & Wang, H.Z.** 2000. Nutritional status in students of primary and secondary schools in Hangzhou. *Chinese Journal of School Health*, 21:168–169.
- Zhang, Y.R. & Cai, L.J.** 2002. A survey on knowledge of balanced diet among students in Changping District. *Chinese Journal of Health Education*, 23: 5–7.

Nutrition as an entry point for health-promoting schools: lessons from China

Schools are ideal settings for nutrition programmes and services because nutrition and education are closely linked and because dietary, hygienic and exercise habits that affect nutritional status are formed during the school-age years. The World Health Organization and FAO collaborate in promoting and strengthening school-based nutrition education in developing countries. Health and education officials, teachers, students, parents and community leaders work to foster health and learning through improvements in school environments, policies and practices.

In collaboration with the Government of China, health-promoting schools (HPS) were piloted in Zhejiang Province. Six primary and secondary schools developed a pilot project to improve the nutritional and health status of students. A model project was created for nutrition interventions to serve as entry points for the development of HPS. The pilot projects aimed to improve the food intake and dietary behaviour of students, school personnel and parents through nutrition education, improved school meal services and other activities.

Head teachers, teachers, students, parents and community leaders carried out the project activities. The importance of a balanced diet, nutritional deficiencies and their effects, and good hygienic practices were taught. Each pilot school developed its own nutrition materials and resources for students, staff and parents. Students attended health education classes, were trained to plan and prepare nutritious meals, and created and disseminated information on nutrition. Nutrition education activities were supplemented with improvements to health-related school policies and the overall environment, including renovations to school facilities and grounds. Students passed on the information they received at school about good nutrition to their families and the wider community. Surveys to evaluate the project found modest but significant effects of the interventions among students, school personnel and parents in terms of knowledge, attitudes and practice. A factor that contributed to the project's success was the enthusiasm with which the participants approached the concept of using nutrition as a point of entry to establish HPS.

La nutrition, point de départ des écoles-santé: les enseignements de la Chine

Deux éléments font de l'école le cadre idéal pour mettre en œuvre des programmes et des services axés sur la nutrition: tout d'abord, nutrition et éducation sont indissociables. Ensuite, c'est pendant la scolarisation que se façonnent les habitudes en matière de régime alimentaire, d'hygiène et d'exercice, dont dépend l'état nutritionnel d'une personne. L'Organisation mondiale de la santé et la FAO travaillent, en collaboration, à la promotion et au renforcement de l'éducation scolaire en matière de nutrition dans les pays en développement. Les responsables de la santé et de l'éducation, les enseignants, les élèves, les parents et les dirigeants locaux s'efforcent de favoriser la santé et l'apprentissage, en améliorant les milieux scolaires, les politiques et les pratiques en usage.

En collaboration avec le Gouvernement chinois, des écoles attachées à la promotion de la santé (les écoles-santé) ont été mises à l'essai dans la province du Zhejiang. Six écoles primaires et secondaires ont établi un projet pilote visant à améliorer l'état nutritionnel et la santé de leurs élèves. Un projet modèle d'interventions axées sur la nutrition en tant que point de départ pour la création d'écoles-santé a été mis au point. Ces projets pilotes avaient pour objectif d'améliorer l'apport et le comportement alimentaires des élèves, du personnel des écoles et des parents, notamment grâce à une sensibilisation à la nutrition et à l'amélioration des services d'alimentation scolaire.

Les activités entreprises dans le cadre de ces projets ont été mises en œuvre par les professeurs principaux, les enseignants, les élèves, les parents et les dirigeants locaux. L'apprentissage a porté sur l'importance d'un régime équilibré, sur les carences nutritionnelles et leurs répercussions et sur les bonnes pratiques d'hygiène. Chaque école pilote a mis au point son propre matériel didactique et ses

propres ressources sur la nutrition, au bénéfice des élèves, du personnel et des parents. Les élèves ont suivi des cours sur la santé, ont appris à planifier et à préparer des repas nutritifs, et ont rassemblé des informations sur la nutrition, qu'ils ont ensuite diffusées. Outre les activités éducatives portant sur la nutrition, le projet était axé sur l'amélioration du cadre général et des politiques scolaires en matière de santé, ainsi que sur la rénovation des installations scolaires et des locaux. Les élèves ont transmis à leur famille et à leurs communautés les informations sur la nutrition acquises à l'école. L'évaluation du projet a montré que les interventions auprès des élèves, du personnel des écoles et des parents, avaient eu des répercussions modestes, mais significatives en matière de connaissances, d'attitude et de mise en pratique. La réaction enthousiaste des participants à l'utilisation de la nutrition comme point de départ pour créer des écoles-santé a été un facteur de réussite.

La nutrición como punto de partida para promover la salud en las escuelas: las enseñanzas de China

Las escuelas son el lugar ideal para aplicar programas y servicios nutricionales, debido a que la nutrición y la educación están estrechamente relacionadas y a que los hábitos alimentarios, de higiene y ejercicio físico que afectan al estado nutricional se crean durante la etapa escolar. La Organización Mundial de la Salud (OMS) y la FAO colaboran a fin de promover y fortalecer la educación nutricional en las escuelas en los países en desarrollo. Los funcionarios de sanidad y educación, los docentes, estudiantes, padres y dirigentes locales trabajan para promover la salud y el aprendizaje mejorando el entorno de la enseñanza y las políticas y prácticas escolares.

En la provincia de Zhejiang, se han experimentado «escuelas promotoras de salud» en colaboración con el Gobierno de China. Seis escuelas primarias y secundarias desarrollaron un proyecto piloto con la finalidad de mejorar la situación nutricional y la salud de los estudiantes. Se creó un proyecto modelo para las intervenciones en materia de nutrición a fin de que sirviera como punto de partida para las escuelas promotoras de salud. Los proyectos experimentales tenían por objeto mejorar la ingestión de alimentos y los hábitos alimentarios de los estudiantes, el personal de la escuela y los padres mediante la educación nutricional, la mejora de los servicios de comidas escolares y otras actividades.

Los directores, profesores, estudiantes, padres y dirigentes locales llevaron a cabo las actividades del proyecto. Se enseñó la importancia de una dieta equilibrada, de las carencias nutricionales y sus efectos, así como de unos hábitos correctos de higiene. Cada escuela piloto elaboró sus propios materiales y recursos sobre nutrición para los estudiantes, el personal y los padres. Los estudiantes asistieron a clases de educación para la salud; se les instruyó sobre el modo de planificar y preparar comidas nutritivas; además, elaboraron y divulgaron información sobre la nutrición. Las actividades de educación nutricional se complementaron con la introducción de mejoras en las políticas escolares relacionadas con la sanidad y el entorno general, incluida la renovación de los locales y patios de las escuelas. Los estudiantes transmitieron a sus familias y a la comunidad en general la información recibida en la escuela sobre una nutrición saludable. En los estudios realizados para evaluar los resultados del proyecto se observó que las intervenciones habían tenido efectos modestos pero significativos en los estudiantes, el personal de la escuela y los padres, con respecto a los conocimientos y a las actitudes y prácticas adoptadas. Un factor que contribuyó a la realización satisfactoria del programa fue el entusiasmo con el que los participantes abordaron el concepto de emplear la nutrición como punto de partida para el establecimiento de las escuelas promotoras de salud.